In the Specification

1. Please replace the last paragraph on page 1 with the following amended paragraph:

The FIPS governing the security requirements for cryptographic equipment ("modules") is set forth in FIPS Publication 140-2. This standard specifies the security requirements that need to be satisfied by a cryptographic module utilized within a security system protecting sensitive but unclassified information. The standard provides for increasing qualitative levels of security ranked as Levels 1 through 4. These levels are intended to cover the wide range of potential applications and environments in which cryptographic modules may be employed. The security requirements cover areas related to the secure design and implementation of cryptographic module ports and interfaces, roles, services and authentication, finite state models, physical security, operation environment, cryptographic key management, electromagnetic interference/compatibility (EMI/EMC), self tests[[;]], design assurance, etc.

2. Please replace the first full paragraph on page 7 with the following amended paragraph:

Thus, system 300 includes three different operatively interconnected layers, identified in FIG. 3 as Layers I, II and III. The three layers are hierarchically distinguished in FIG. 3 by dashed lines 350 and 360. Layer I is the FIPS-compliant VPN layer, Layer II is the classical encryption layer, and Layer III is the QKD layer. Layers I-III are hierarchically arranged so that Layer I is the "highest" or uppermost level and Layer [[II]] III is the "lowest" or bottom level.

3. Please replace the last paragraph on page 8 carrying over to page 9 with the following amended paragraph:

Because system 300 includes a FIPS-compliant VPN as Layer I and a classic encryption system in Layer II (which may also be FIPS-compliant, but [[is]] need not be), system 300 as a whole is FIPS-compliant. The QKD system in Layer III operates transparently beneath FIPS-compliant Layer I and (optionally FIPS-compliant) layer II. Nevertheless, Layer III provides system 300 with enhanced security as compared to the having only the classical encryption layer because the quantum transmission of the key. It is important to note that the presence of QKD Layer III does not render the system as a whole FIPS-noncompliant because it only serves to enhance the security of the system.